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FIRST RESULTS FROM SIR-C CALIBRATION

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The SIR-C/X-SAR imaging radar is scheduled for launch in April 1994. This multi-frequency radar has fully polarimetric capability at L- and C-band, and a single polarization at X-band (X-SAR). Calibration of polarimetric L- and C-band data for all the different modes SIR-C offers is an especially complicated problem. The solution involves extensive analysis of pre-flight test data to come up with a model of the system, analysis of in-flight test data to determine the actual antenna pattern and gains of the system during operation, and analysis of data from over ten calibration sites distributed around the SIR-C/X-SAR orbit track.

The SIR-C mission will be the first time a multi-frequency polarimetric imaging radar employing phased array antenna has been flown in space. The effort put into the calibration of SIR-C data products has been considerable and is also unique in that this is the first time anyone has attempted to calibrate a spaceborne radar of this complexity.

First results from the calibration analysis of SIR-C data will be presented at the conference.

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